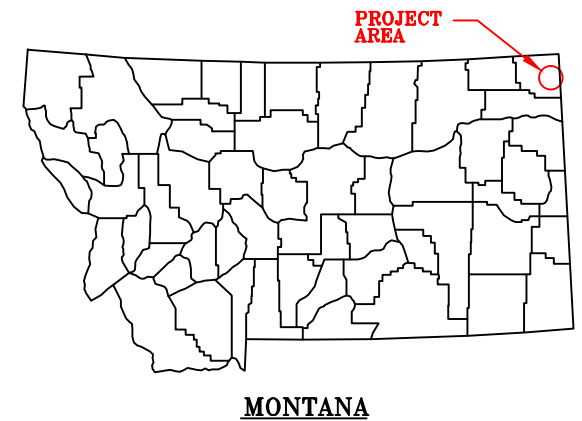




DUCKS UNLIMITED
PROJECT
LAKE CREEK MARSH REPAIR
SECTION 31, T33N, R58E,
SHERIDAN COUNTY, MONTANA
IN COOPERATION WITH
MONTANA FISH WILDLIFE & PARKS
US FISH & WILDLIFE SERVICE



SPECIFICATIONS

- 101 GENERAL CONDITIONS
- 201 MOBILIZATION
- 202 SITE PREPARATION
- 203 EXCAVATION
- 204 EMBANKMENT CONSTRUCTION
- 205 WATER
- 305 RIPRAP, REVETMENT & AGGREGATE PLACEMENT
- 307 SHEET PILING
- 309 STRUCTURAL STEEL
- 311 REMOVAL OF EXISTING CULVERTS AND STRUCTURES

PLAN INDEX

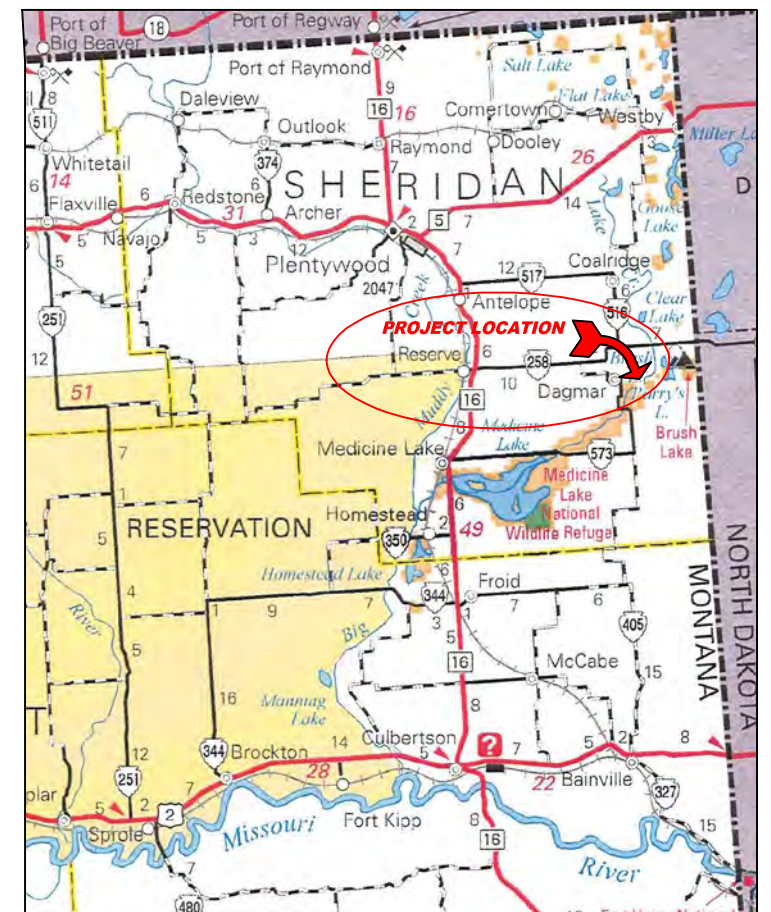
- 1 PROJECT LOCATION MAPS
- 2 EMBANKMENT REPAIR PLAN & PROFILE
- 3 STRUCTURE MODIFICATION DETAILS

ESTIMATED QUANTITIES

MOBILIZATION	1 L.S.
SITE PREPARATION	1 L.S.
EMBANKMENT CONSTRUCTION	125 C.Y.
SHEET PILE MATERIAL	301 S.F.
SHEET PILE INSTALLATION	301 S.F.
STRUCTURAL STEEL (PILE CAP)	1 L.S.
RIPRAP PLACEMENT	25 C.Y.



VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

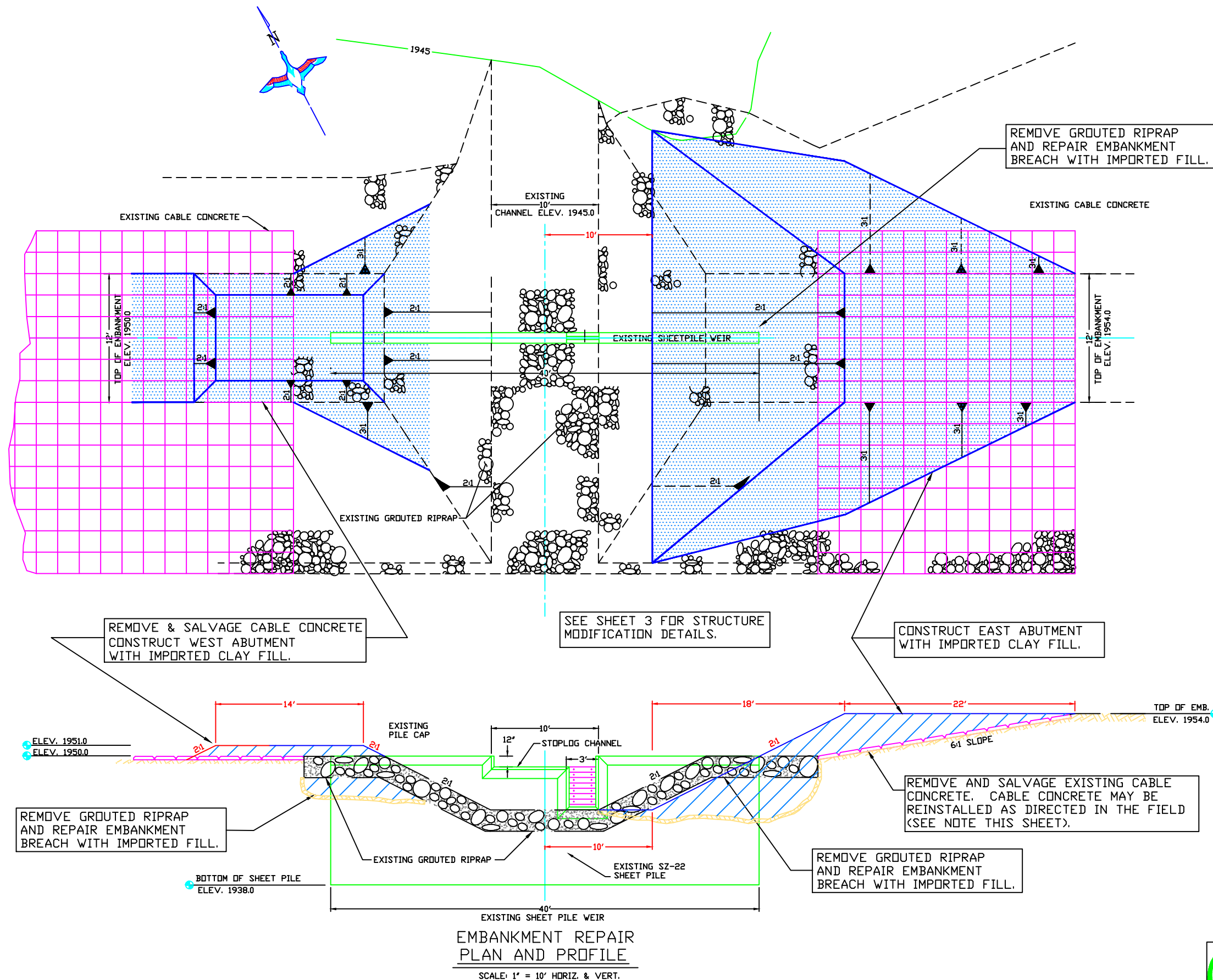
DIRECTIONS:

FROM DAGMAR HEAD SOUTH ON S. DAGMAR RD FOR 3.5 MILES, TURN LEFT ONTO BERGIERS LAKE RD. AND TRAVEL .4 MILES. TURN LEFT ONTO THE COUNTY ROAD TRAVEL .12 MILES TO A "Y" INTERSECTION, TURN LEFT ON TRAIL. FOLLOW TRAIL FOR 1 MILE TO A "T" INTERSECTION, TURN LEFT, PROJECT LOCATION APPROXIMATELY .24 MILES DOWN THIS TRAIL.

AGENCY CONTACT:
TIM CONNOLLY
US FISH & WILDLIFE SERVICE
MEDICINE LAKE NATIONAL WILDLIFE REFUGE
406-789-2305

	I hereby certify that this engineering document was prepared by me or under my supervision and that I am a duly licensed Professional Engineer in under the laws of the state of Montana	
	Roger C. Smith	License Number 9415P.E. July 20, 2012
	Printed or typed name My license expiration date is June 30, 2014	
	Pages or sheets covered by this seal: Sheets 1 through 3	

	PROJECT NO. MT-143-1	DESIGNED BY: JAS
	LAKE CREEK MARSH REPAIR	DRAWN BY: JAS
	PROJECT LOCATION MAPS	SURVEYED BY:
	CHECKED BY: BRK	APPROVED BY:
GREAT PLAINS REGIONAL OFFICE	SHEET NO. 1 OF 3	APPROVED BY:
DATE: 11-19-2007		



CONSTRUCTION NOTES:

SITE PREPARATION - SHALL CONSIST OF ALL WORK REQUIRED TO REMOVE, SALVAGE AND STOCKPILE ALL CABLE CONCRETE SECTIONS FROM THE EAST ABUTMENT AND THOSE REQUIRED TO CONSTRUCT THE WEST ABUTMENT. IT IS ANTICIPATED THAT THE SALVAGED CABLE CONCRETE WILL BE REINSTALLED AT APPROPRIATE AREAS ON SITE HOWEVER, IT MAY BE REQUIRED THAT THE CABLE CONCRETE BE DISPOSED OFFSITE. IT SHALL ALSO INCLUDE WORK TO REMOVE, BREAK UP AND STOCKPILE GROUTED RIPRAP AS REQUIRED TO EXCAVATE AND EXPOSE BREACHED AREAS AROUND THE ENDS OF THE EXISTING WEIR.

EMBANKMENT REPAIR - THE FWS WILL FIND AND HAUL ALL THE SUITABLE CLAY MATERIAL REQUIRED TO REPAIR EMBANKMENT BREACHES. THE CONTRACTOR WILL BE RESPONSIBLE TO PLACE AND RECOMPACT FILL TO REPAIR AND CONSTRUCT EMBANKMENT BREACHES.

ESTIMATED QUANTITIES

EMBANKMENT - 125 C.Y. (HAULED & STOCKPILED ON SITE BY FWS. PLACED AND COMPACTED BY CONTRACTOR.

REMOVE & SALVAGE - 1 L.S.

SHEET PILE MATERIAL - 5 @ 10'
14 @ 8'
1 @ 7'
1 @ 6'
1 @ 5'
301 S.F.

PILE CAP - 40 L.F. 5' x 5' x 3/8" ANGLE
20 L.F. 10' x 3/8" PLATE

RIPRAP - 25 C.Y. (HAULED & STOCKPILED ON SITE BY FWS. PLACED BY CONTRACTOR)



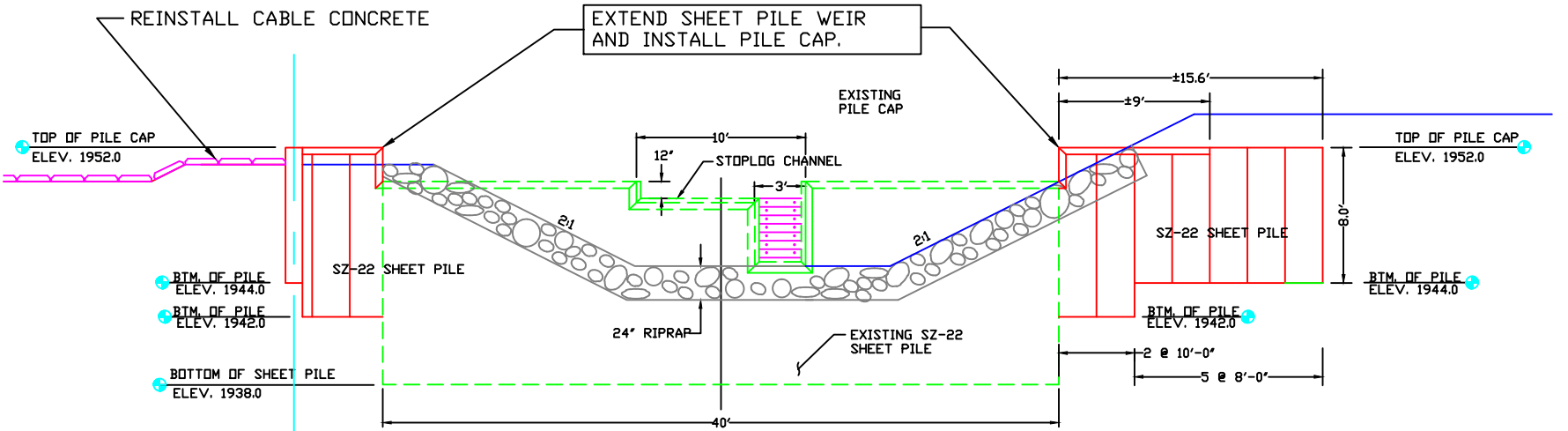
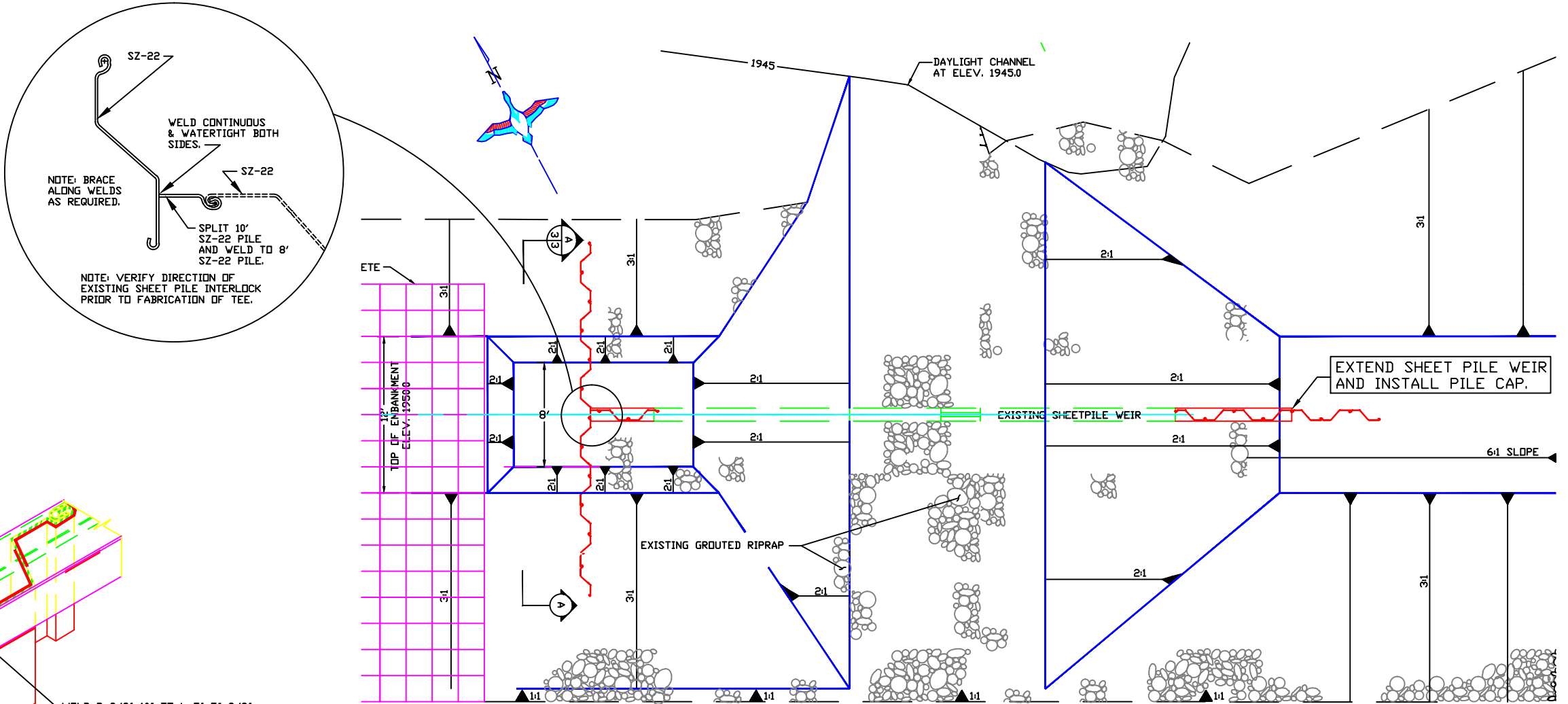
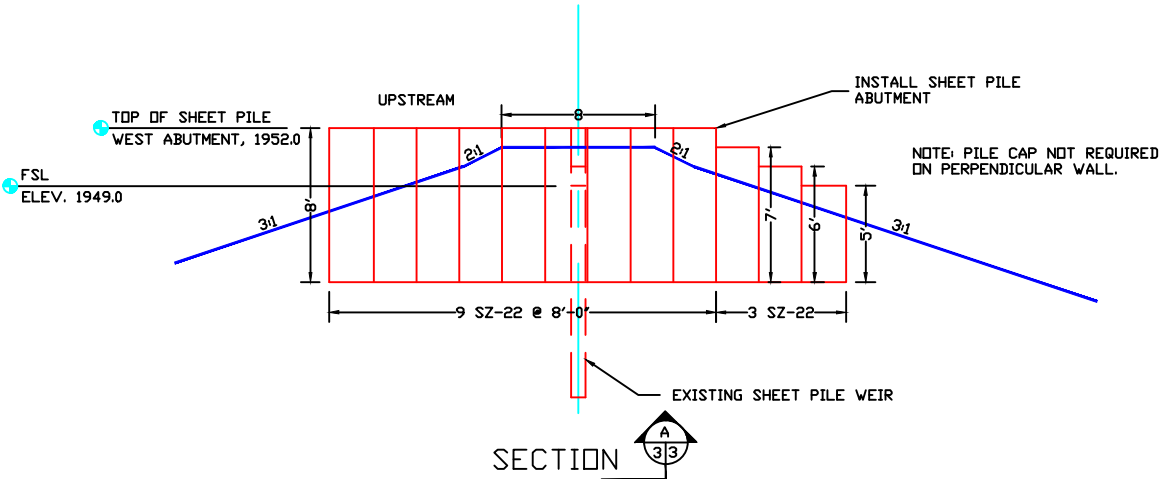
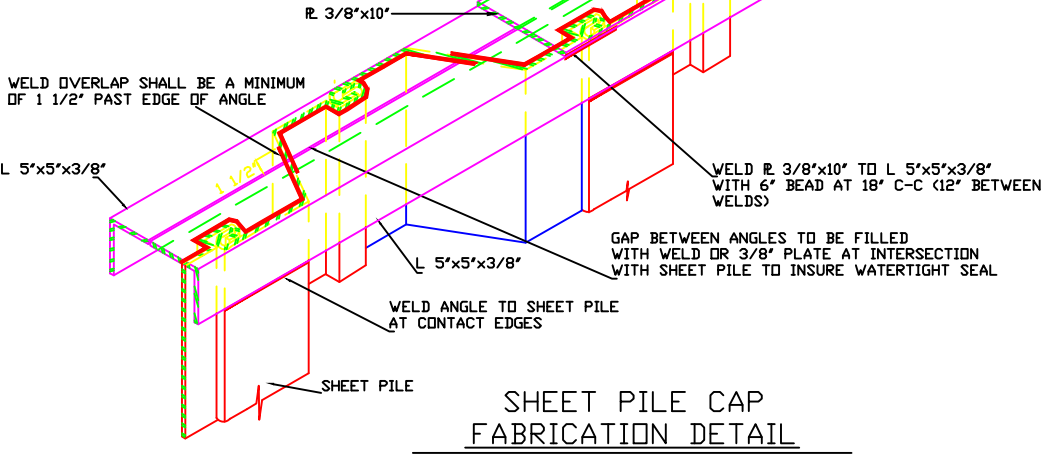
<p>GREAT PLAINS REGIONAL OFFICE</p>	PROJECT NO. MT-143-1		DESIGNED BY: JAS
	LAKE CREEK MARSH		DRAWN BY: JAS
	EMBANKMENT REPAIR		SURVEYED BY: .
			CHECKED BY: .
DATE: 11-14-2007	SHEET NO. 2 OF 3	APPROVED BY: .	APPROVED BY: .

CONSTRUCTION NOTES:

STRUCTURE MODIFICATIONS - CONTRACTOR SHALL INSTALL ADDITIONAL SHEET PILE TO ENDS OF EXISTING STRUCTURE. WORK SHALL INCLUDE EXPOSING THE LAST INTERLOCK ON EACH END, FABRICATING SZ-22 TEE SECTION, DRIVING ADDITIONAL SHEET PILE AND INSTALLING PILE CAP. COST OF STRUCTURE MODIFICATIONS SHALL BE PAID FOR AT THE UNIT PRICES BID FOR BID ITEMS SHEET PILE INSTALLATION AND STRUCTURAL STEEL.

RIPRAP - IF SALVAGED ROCK FROM GROUTED RIPRAP IS DETERMINED TO BE SUITABLE BY DU FIELD ENGINEER, IT MAY BE USED AS RIPRAP. ADDITIONAL RIPRAP WILL BE HAULED AND STOCKPILED BY FWS FOR PLACEMENT BY THE CONTRACTOR.

- NOTES:
1. ALL WELDS TO BE 1/4" FILLET WELDS (SEE D.U. SPECIFICATIONS).
 2. ALL WELDS WILL BE SUBJECT TO LAMPING. ANY AREAS FAILING WILL BE REWELDED BEFORE ACCEPTANCE OF PROJECT.
 3. TOP OF SHEET PILE SHALL BE TRIMMED TO GRADES INDICATED ON PLANS TO REMOVE ANY DAMAGE CAUSED BY DRIVING. ANY TRIMMING OVER 3" SHALL BE CONSIDERED CUT-OFF AND WILL BE DEDUCTED FROM THE COST OF "SHEET PILE INSTALLATION."
 4. ABOVE F.S.L. PILE CAP NEED NOT BE WATERTIGHT, WELDS SHALL CONSIST OF A 6" BEAD AT 18" C-C (12" BETWEEN WELDS). BETWEEN ELEVATIONS 1949.0 & 1950.0, ALL WELDS SHALL BE WATERTIGHT.
 5. LENGTH OF PILE CAP AS SHOWN ON PLANS.
 6. ALL WELDS AROUND STOPLOG BAY TO BE CONTINUOUS TO INSURE A WATERTIGHT SEAL.



STRUCTURE MODIFICATIONS
PLAN AND PROFILE

SCALE: 1" = 10' HORIZ. & VERT.

 GREAT PLAINS REGIONAL OFFICE DATE: 11-14-2007	PROJECT NO. MT-143-1 LAKE CREEK MARSH STRUCTURE MODIFICATIONS	DESIGNED BY: JAS
		DRAWN BY: JAS
		SURVEYED BY: .
		CHECKED BY: .
SHEET NO. 3 OF 3	APPROVED BY: .	APPROVED BY: .